APV x600 Series

DATASHEET

Application Delivery Controller

APV1600, APV2600, APV4600, APV5600, APV6600, APV8600, APV9600

Array Networks APV Series of Application Delivery Controllers optimizes the availability, user experience, performance, security and scalability of mobile, cloud and enterprise application delivery from anywhere-to-anywhere. This range of small, medium and large appliances were designed for fast, secure and intelligent acceleration of demanding applications and traffic aggregation in enterprises of all sizes. The feature rich appliance form factor results in ease of integration with traditional data centers, virtualized datacenters and cloud infrastructures, and delivers outstanding business value.

Product Features and Benefits

- 1 to 30 Gbps throughput and 500K to 20 million concurrent application connections for small enterprise to cloud-scale performance
- Intelligent traffic management for optimized application delivery and availability
- Server offloading for improved application acceleration, scale and TCO
- Local/global load balancing and clustering for 99.999% application uptime
- Built-in caching, compression, SSL processing and TCP connection multiplexing for 50% or more improvement in user experience
- Network, server and application firewall, and SSL encryption for securing and protecting applications without impacting performance
- Browser based Web user interface for ease of management
- API's for integration with applications, virtual and datacenter management tools and 3rd party products
- Appliance form factor for simplified deployment

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• *Enterprise Scalability and Performance*

The APV appliance series of application delivery appliances are unique in their ability to provide unparalleled scalability and performance in compact 1U and 2U form factors. The APV series appliances are powered by Array Networks patented SpeedCore™ software platform with its rich application delivery features and parallelized design which fully leverages multi-core processor technology for linear scalability. This enables the APV series appliances to handle heavy Layer 4 through 7 traffic loads while delivering unmatched performance and scalability for small, medium and large enterprises.

• *Application Availability*

The APV series appliances deliver 99.999% uptime for enterprise application services with intelligent local, global and link load balancing. These appliances provide health check mechanisms for automatic failover of application services. This results in 24x7 application availability while reducing business continuity risks.

• *Application Aware Intelligence and Control*

The application aware appliance eliminates application performance bottlenecks, reduces application deployment complexity and provides seamless application integration. These appliances are fully aware of Layers 4 through 7 application traffic, connections, transactions, and content. This enables IT to create event-driven policies for intelligent distribution of application traffic across web and application servers, and eliminates the need to replicate content across multiple servers.

Using SpeedCore APIs IT administrators can integrate APV series appliances with virtualized IT infrastructures to dynamically provision IT resources based on real-time application traffic demands.

• *SSL and Server Offloading*

The APV series appliances offloads server intensive 1024-bit, 2048-bit and 4096-bit SSL processing, TCP connection management, data compression and HTTP request processing from servers. This speeds-up response times and increases server utilization.

• *Unified Voice, Video and Data Delivery*

The APV series appliances are optimized for unified delivery of voice, video and data application services with its rich set of load balancing and content switching policies. These appliances can support multiple virtual IPs for enabling individual application services, with a given set of availability, acceleration and security policies that are specific to delivering voice, video or data.

• *Securing Applications and Data*

The APV series appliances support comprehensive network, server and application firewall capabilities to protect against denial of service and malformed URL attacks. These appliances provide rich set of firewall policies from Layers 2 through 7 that can be layered on top of each other for more comprehensive security.

Features:

Application Availability

Intelligent but simple Layer 2-Layer 7 policy and group management

- Virtual service, multi-level, tree like policy routing
- Static, default and backup policies and groups
- Layer 2-Layer 7 application routing policy
- Layer 2-Layer 7 server persistence
- Application load balancing based on round robin, weighted round robin, least connections, shortest response, SNMP

Layer 2/3 Application Load Balancing

- IP/MAC based load balancing, any IP application protocol
- Round robin, persistent IP (source + destination), return to sender
- Firewall, IPS/IDS/AntiSpam/AntiVirus, and composite applications

Layer 4 Application Load Balancing

- TCP, TCPS, UDP protocols supported
- Round robin, weighted round robin, least connections, shortest response
- Persistent IP, hash IP, consistent hash IP, persistent IP + port, port range
- All single port TCP applications, RADIUS, DNS servers support
- Composite IP applications support

Layer 7 Application Load Balancing

- HTTP/HTTPS/FTP/FTPS/SIP/RTSP/RDP
  - L7 content switching
  - QoS network, client port
  - SSL session ID, SIP session ID
  - HTTP URL, host name, cookie, any header
  - Hash header, cookie, query
- URL redirect, HTTP request/response rewrite
- HTTP request filter

Advanced Content Routing

- Configurable reverse or transparent proxy mode per VIP
- Configurable reverse or transparent proxy mode
- Build nested L7 and L4 policies
- Combine L7 and L4 policies

Global Server Load Balancing (GSLB)

- Applications availability from multiple locations worldwide
- DNS DoS protection
- Global site/service selection
- Proximity and IP persistence for nearest site for improved performance.
- Delivers local and global load balancing between multi-site SSL VPN deployments

Link Load Balancing

Provide WAN link high availability and efficient usage

- Policy based routing based on Src/Dest IP, port, and IP protocols
- Priority and auto-failover
- Static and dynamic routing support
- Return to sender (RTS)/IP flow
- SmartNAT
- Multiport application support
- Multi-homing support, service IP health check
- Link health and performance check
- QoS and bandwidth management

Clustering

- Up to 32 nodes
- Active/active; Active/standby
- Configuration synchronization
- Application-specific health checks
- Fast failover - via USB ports

Application Acceleration

SSL Offloading and Acceleration

- Offloads HTTPS processing up to 90% while securing sensitive data
- Hardware acceleration
- Optimized for 1024-bit and 2048-bit SSL keys
- HTTPS, NNTPS, SMTPS, POPS, IMAPS, LDAPS support
- SSL encryption between APV and servers
- Full certificate management features
- Processes millions of CRL entries
- Shares certificates across virtual services

High-Performance Caching

- Virtualized cache
- Memory-based DRAM cache reduces seek times by 1000x
- Fully-compliant with HTTP 1.1 specs

TCP Acceleration

- 100x acceleration by off-loading TCP processing
- Connection pooling & multiplexing
- TCP buffering
- Client connection persistence

Dynamic Compression

- Virtualized compression
- Inline HTTP processing
- Hardware acceleration
- Compresses HTML, XML, Java scripts and CSS
- Compresses Microsoft file formats (.DOC, .XLS, .PPT) and PDF

Application Security

Server Security

- Full proxy-based firewall safeguards applications from network attacks
- TCP syn-flood protection
- Flash/surge event protection
- Full DoS protection
- URL filtering

Network Security

- Stateful packet inspection firewall
- Supports over 1000 ACL rules without performance degradation

Networking

- Static and port-based NAT translation for maximum flexibility and scalability
- VLAN, trunking support

IPv6 Support

- IPv4 to IPv6 NAT, IPv6 to IPv4 NAT
- IPv6 support

Network Address Translation

- Static and port-based translation for maximum flexibility and scalability

Management

- Centralized management tools that simplify installation without compromising security or flexibility
- Single point of cluster management
- CLI Interface for configuration and monitoring
- Secure SSH remote network management
- Secure Web UI access
- XML-RPC API for integration with 3rd party products
- SNMP V2 / V3 and private MIBs
- Syslog (UDP or TCP)
- Administrator and operator account management
- E-mail/paging notification/alerting capability
- Multiple configuration files
- Multiple unit configuration synchronization
- On-line troubleshooting
- Real-time monitoring graphs

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Technical Specifications

Features	APV1600	APV1600 Turbo	APV2600	APV4600	APV5600	APV6600	APV8600	APV9600
Throughput	1.5 Gbps	2.3 Gbps	4 Gbps	6Gbps ASIC Backplane: 54Gbps	10 Gbps	18 Gbps	24Gbps	30Gbps
Max Connections	500,000	1M	4M	8M	8M	16M	16M	16M
SSL TPS	5,000	7,500	12,000/ 15,000	13,500/ 22,500	22,500	22,500/ 45,000	45,000	45,000
SSL Throughput	700Mbps	1 Gbps	1/1.6 Gbps	2.5/5Gbps	5Gbps	5/10Gbps	10Gbps	10Gbps
Memory	4GB	4GB	8GB	16GB	16GB	32GB	32 GB	32 GB
Port Configuration	Fixed: 4xGbE copper	Fixed: 4xGbE copper	Fixed: 4xGbE copper Optional: 8xGbE copper 2xSFP fiber	Fixed: 12xGbE copper 4xSFP fiber	Fixed: 8xGbE copper Optional: 12xGbE copper 4xSFP fiber	Fixed: 16 x GbE copper Optional: 8xSFP fiber 2x10G SFP+ fiber	Fixed: 16xGbE copper 4xSFP fiber Optional: 8xSFP fiber 4x10G SFP+ fiber	Fixed: 16xGbE copper 2x10G SFP+ fiber Optional: 8xSFP fiber
Power Supply	Single	Single	Single/Dual	Dual	Dual	Dual	Dual	Dual
Typical Power Consumption (Watts)	126	126	136	162	160	244	286	289
Input Voltage	90-264 VAC 6-3A, 47-63Hz, ATX Auto-Switching		90-264VAC, single: 6-3A, 47 63Hz, Dual: 4-2A, 47-63Hz, ATX Auto-Switching	90-264VAC, 8.5A, 47-63 Hz, ATX Auto-Switching	90-264VAC; 8.5A; 47-63 Hz, ATX Auto-Switching			
Standards	10/100/1000 Base-TX (GbE), 1000 Base-SX/LX/ZX, 10 GigE, 10 Gig XF SR/LR, IP, SSH, HTTP 1.0/1.1, SSL, SNMP, RS232							
Management	SSH CLI, Direct Console DB9 CLI, SNMP, Single Console per Cluster, XML-RPC				SSH CLI, Direct Console DB9 CLI, SNMP, Single Console per Cluster, XML-RPC, Out of Band Management - RJ45			
Dimensions	1U: 17"W x 15"D x 1.75"H		Single Power: 17"W x 15"D x 1.75"H Dual Power: 17W x 19.875D x 1.75H	2U: 17"W x 22.5"D x 3.5"H				
Weight	13.6 lbs		Single Power: 13.6 lbs Dual Power: 17.2 lbs	28 lbs				
Environmental	Operating Temperature: 0° to 45°C, Humidity: 0% to 90%, Non condensing							
Regulatory Compliance	IEC 60950-1, CSA 60950-1, EN 60950-1, ICES-003, EN 55024, CISPR 22, AS/NZS 3548, FCC, 47FR part 15 Class A, VCCI-A							
Safety	CSA, C/US, CE, UL							

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